

CLAIMS:

1. Concealed sprinkler with drop down deflector assembly, comprising:

a body having a passage with an inlet and an outlet for conducting flow of pressurized fluid,
a valve assembly for sealing the passage outlet,

a frame connected to the body and having opposed arms, each arm depending from the body and having a free end portion, the free end portions of the arms being separated by a gap so that the arms (are not subjected to assembly loads or system pressure loads,) and

a drop down deflector assembly mounted on said free end portions of said arms so as to be displaceable from a first elevation to a second, lower elevation.

2. Concealed sprinkler according to claim 1 wherein the gap between said free end portions of said arms is greater than the inner diameter of said passage at its outlet.

3. Concealed sprinkler according to claim 3 wherein said body and frame are a single cast unit.

4. Concealed sprinkler according to claim 1 wherein said body and frame are discrete units provided with means for fastening the frame and body.

5. Concealed sprinkler according to claim 1 wherein said drop down deflector assembly includes a deflector plate coupled to a pair of guide pins

journaled in said free end portions of said arms, and means for yieldingly urging said deflector plate to said first elevation.

6. A sprinkler, comprising:

a body having a passage with an inlet and an outlet for conducting flow of pressurized fluid, said body having a valve seat at the region of the outlet,

a valve assembly for sealing the passage outlet including a compound lever assembly, said compound lever assembly including expandable jaws for holding a rigid thermal responsive element therebetween, said compound lever assembly being moveable upwardly against a valve upon expansion of the jaws, and means for adjusting compressive preload on the valve by expanding the jaws to cause the compound lever assembly to move upwardly against the valve.

7. A sprinkler, comprising:

a body having a passage with an inlet and an outlet for conducting flow of pressurized fluid, said body having a valve seat at the region of the outlet,

a valve assembly for sealing the passage outlet including an upper lever and a lower lever, each pivotably mounted at an end portion thereof to the body, a valve supported by said upper lever, the upper lever being supported along another end portion thereof by the lower lever such that upward pivoting movement of said lower lever causes upward pivoting movement of said upper lever against the

valve, said upper and lower levers having jaws for holding a rigid thermal responsive element therebetween, said jaws being expandable upon upward pivoting movement of the lower lever, and means for adjusting compressive pre-load on said valve against the valve seat by expanding said jaws to cause said upper lever to pivot upwardly against the valve.

8. A sprinkler according to claim 6 or claim 7 wherein said means for adjusting compressive pre-load includes means for displacing said thermal responsive element held by said jaws.

9. A sprinkler according to claim 6 including a spring washer between said compound lever assembly and valve.

10. A sprinkler according to claim 7 including a spring washer between said upper lever and said valve.

11. A sprinkler with drop down deflector assembly, comprising:

a body having a passage with an inlet and an outlet for conducting flow of pressurized fluid,
a valve assembly for sealing the passage outlet,

a frame connected to the body and having opposed arms, each arm depending from the body and having a free end portion, the arm free end portions being separated by a gap so that the arms are not subjected to assembly loads or system pressure loads,

PI a drop down deflector assembly mounted on said free end portions of said arms so as to be displaceable from a first elevation to a second, lower elevation,

PI said valve assembly including a compound lever assembly, said compound lever assembly including expandable jaws for holding a rigid thermal responsive element therebetween, said compound lever assembly being moveable upwardly against a valve upon expansion of the jaws, and means for adjusting compressive pre-load on the valve by expanding the jaws to cause the compound lever assembly to move upwardly against the valve.

12. A sprinkler with drop down deflector assembly, comprising:

PI a body having a passage with an inlet and an outlet for conducting flow of pressurized fluid,

PI a valve assembly for sealing the passage outlet,

PI a frame connected to the body and having opposed arms, each arm depending from the body and having a free end portion, the arm free end portions being separated by a gap so that the arms are not subjected to assembly loads or system pressure loads,

PI a drop down deflector assembly mounted on said free end portions of said arms so as to be displaceable from a first elevation to a second, lower elevation,

P1 said valve assembly including an upper lever and a lower lever each pivotably mounted at an end portion thereof to the body, a valve supported by said upper lever, the upper lever being supported along another end portion thereof by the lower lever such that upward pivoting movement of said lower lever causes upward pivoting movement of said upper lever against the valve, said upper and lower levers having jaws for holding a rigid thermal responsive element therebetween, said jaws being expandable upon upward pivoting movement of said lower lever, and means for adjusting compressive pre-load on said valve against the valve seat by expanding said jaws to cause said upper lever to pivot upwardly against the valve.